

## HisTrap FF

### Product Information

**Cat#No#** His-110P

### Product Overview

HisTrap FF is a ready-to-use column, prepacked with precharged Ni Sepharose 6 Fast Flow for preparative purification of histidine-tagged recombinant proteins by immobilized metal ion affinity chromatography (IMAC).

### Description

Ni Sepharose 6 Fast Flow consists of 90  $\mu$ m beads of highly cross-linked agarose, to which a chelating ligand has been immobilized. This chelating ligand is charged with Ni<sup>2+</sup> ions, the first-choice metal ion for purifying most histidine-tagged proteins. The negligible leakage of Ni<sup>2+</sup> ions from the matrix ensures reliable capture of histidine-tagged proteins in repeated IMAC purifications.

### Characteristic

High binding capacity, approx. 40 mg/mL resin.

Negligible leakage of Ni<sup>2+</sup>.

Prepacked columns offer reliable and convenient time-saving purification of histidinetagged recombinant proteins.

Compatible with a wide range of reducing agents, detergents, denaturants, and other additives.

### Maximum operating pressure

5 bar [0.5 MPa] (70 psi)

### Metal ion capacity

~ 15  $\mu$ mol Ni<sup>2+</sup> /ml medium

### Matrix

Highly cross-linked spherical agarose, 6%

### Average particle size

90  $\mu$ m

### Dynamic binding capacity

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Approx. 40 mg (histidine)6 -tagged protein/ml medium.

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### **Recommended flow rate**

1 ml/min and 5 ml/min for 1 ml and 5 ml column, respectively.

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### **Recommended column height**

25 mm

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### **Chemical stability**

0.01 M HCl, 0.1 M NaOH; Tested for one week at 40°C. 1 M NaOH, 70% acetic acid; Tested for 12 h. 2% SDS; Tested for 1 h. 30% 2-propanol; Tested for 30 min.

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### **Chemical compatibility**

Stable in all commonly used buffers, reducing agents, denaturants, and detergents.

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### **pH working range**

2 to 14

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### **CIP stability**

3 to 12

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### **Storage**

4 to 30°C, 20% Ethanol

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### **Binding buffer**

20 mM sodium phosphate, 0.5 M NaCl, 5 mM imidazole, pH 7.4.

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### **Elution buffer**

20 mM sodium phosphate, 0.5 M NaCl, 0.5 M imidazole, pH 7.4.

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### **Cleaning-in-place**

Ionically bound proteins: Wash with several column volumes of 1.5 M NaCl; then wash with approx. 10 column volumes of distilled water.

Precipitated proteins, hydrophobically bound proteins, and lipoproteins: Wash the column with 1 M NaOH, contact time usually 1 to 2 hours (12 hours or more for endotoxin removal). Then wash with approx. 10

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column volumes of binding buffer, followed by 5 to 10 column volumes of distilled water.

Hydrophobically bound proteins, lipoproteins, and lipids: Wash with 5 to 10 column volumes of 30% isopropanol for about 15 to 20 minutes. Then wash with approx. 10 column volumes of distilled water.

Alternatively, wash with 2 column volumes of detergent in a basic or acidic solution. Use, for example, 0.1 to 0.5% nonionic detergent in 0.1 M acetic acid, contact time 1 to 2 hours. After treatment, always remove residual detergent by washing with at least 5 column volumes of 70% ethanol. Then wash with approx. 10 column volumes of distilled water.

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**Pack size**

5 × 5 mL

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**Maximum flow velocity**

4 ml/min and 20 ml/min for 1 ml and 5 ml column, respectively.

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**Dimensions**

7 × 25 mm

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**Column volume**

1 ml

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**Column i.d.**

7 mm

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**Column hardware pressure limit**

5 bar (0.5 MPa)

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